

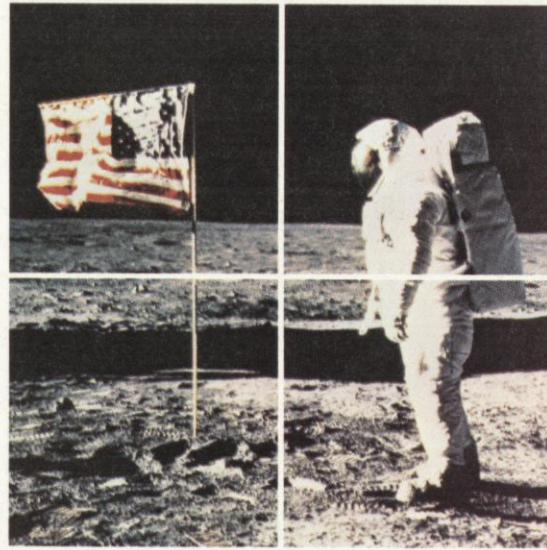
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BOEING ANNUAL REPORT

1969







## CONTENTS

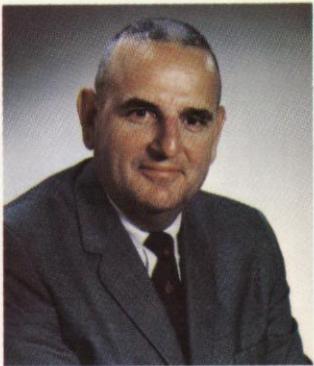
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2	MESSAGE TO STOCKHOLDERS
6	COMMERCIAL AIRCRAFT
9	FINANCIAL REVIEW
9	HIGHLIGHTS
14	TEN YEAR COMPARATIVE FINANCIAL DATA
16	FINANCIAL STATEMENTS
21	ACCOUNTANTS' REPORT
22	DIRECTORS AND OFFICERS
25	SUPersonic TRANSPORT
27	MILITARY PRODUCTS
30	SPACE PROGRAMS
32	INTERNATIONAL OPERATIONS

The Cover – Boeing products and people: a montage of the planes, space vehicles, ships recognized everywhere, with the men and tools that brought them into being.

Opposite – 747s, the world's largest civilian airliners, move through final assembly in world's largest building.

Annual meeting of Boeing stockholders will be held at the offices of the company, Seattle, Washington, on April 27, 1970. Formal notice of the meeting, proxy statement and form of proxy will be sent to stockholders about April 1.



T. A. Wilson



William M. Allen

#### MESSAGE TO STOCKHOLDERS

1969 sales of \$2.83 billion were down approximately \$439 million from the record level reported in 1968. Net earnings of \$10.2 million for the year reflect a \$6.8 million operating loss, after credit for Federal income taxes, offset by investment tax credit amortization of \$17 million. Earnings per share of 47c and net profit on sales of just under four-tenths of a percent were substantially below the comparable 1968 figures. The disappointing earnings level is attributable to lower delivery and production rates on the 707, 727 and 737 jet transport programs, lower government program earnings, heavy commercial program writeoffs, inflationary cost pressures that affected all phases of the company's operations, significant expenditures in support of new business activities, and the continued high interest charges on the substantially increased borrowings from commercial banks.

Although the earnings picture was unsatisfactory, there were a number of accomplishments and milestones during 1969 which deserve particular mention. Certification of the 747 by the Federal Aviation Administration for the transportation of passengers by airlines and first deliveries of the aircraft to the airlines were significant and gratifying achievements. The company contributed in a number of important areas to the successful moon landings. Finally, solid progress was evidenced by FAA approval of the company's design for the supersonic transport.

Following first flight of the 747 on February 9, an extensive test program was carried out, leading

to the certification at year end. The anticipated excellent flying qualities of the airplane were confirmed during the test program and pilots are unanimous in their praise of the handling characteristics of the 747. Passenger reaction during the initial period of scheduled flights indicates a definite preference for the comfort and other advantages afforded by the 747. Another basic strength of the program is the broad customer list of 28 airlines, including practically all of the long range carriers in the world. However, non-recurring costs and the cost of the initial production phase of the program for a variety of reasons substantially exceeded estimates made at the beginning of 1969.

A problem in connection with the program that has been widely discussed relates to the engines. Delivery delays and other problems with the engines have affected the flight test and certification programs and delivery schedules. Further, engines for initial airplane deliveries, although meeting all operational safety requirements, do not meet specifications on thrust and fuel consumption. The engine manufacturer has identified the causes and is incorporating changes that are designed to correct the specification deficiency.

Structural tests of the 747 during late 1969 and early 1970 produced most satisfactory results. At Everett, engineers systematically destroyed a structurally complete airplane, flexing its wing upward approximately 26 feet and applying airframe stresses of 116 percent of ultimate design load before the wing broke. This is equivalent to 174 percent of the maximum load the airplane is expected to experience in airline operations. Data from 911 instrumented positions was collected as wing loading was increased to 1,350,000 pounds.

Results of the static tests mean that the 747s in the future can be flown at greater gross weights in commercial service. This translates either into more fuel for increased range or more payload. The company is analyzing the freighter and convertible versions of the 747 with the objective of being able to offer improved versions in early 1972. Deliveries of convertible aircraft scheduled for the first half of 1971 have been shifted to the first half of 1972.

The completed tests used one of two airframes the company will destroy. The second is undergoing fatigue testing to simulate 20 years of airline service.

Boeing played a major role in the successful moon landings which provided the most important international news events of 1969. Besides designing and manufacturing the huge first stages, the company provided systems engineering, vehicle integration and mission support for the entire Saturn V rockets, undertook launch responsibilities at Cape Kennedy and technical integration and evaluation of the Apollo command, service and lunar modules. The moon landings climaxed a program in which the company has been involved since 1961. At year end, equipment for the Apollo 13 mission, scheduled for the Spring of 1970, was on the launch pad at Cape Kennedy, while Boeing's Huntsville staff was designing a Lunar Rover wheeled vehicle intended to be transported on a 1971 Apollo mission. The vehicle will transport astronauts on surface trips from their lunar landing.

As to future space programs, Boeing and the Lockheed Missiles and Space Company have teamed to compete for NASA's proposed Space Shuttle craft, a reusable transport type vehicle which would fly between earth and low earth orbit.

Late in the year, Congress authorized an appropriation of \$85 million for the 1970 fiscal year to start construction of two supersonic transport (SST) prototypes. Thereafter, work began on full-scale engineering mockups; and engineering drawings to be used for prototype parts fabrication were released in the first weeks of 1970. The SST is not expected to have an important effect on employment in the near future, but about 10,000 persons will be employed on the prototype project at its peak in 1971. The first airplane is scheduled to roll out late in 1972.

The Minuteman missile, Chinook and CH-46 helicopters, SRAM (Short Range Attack Missile), B-52 modification and maintenance, and Burner II upper stage space booster programs accounted for the major portion of the missile and military aircraft sales. While these products will continue to generate sales during 1970, the company's long range future in Department of Defense activity depends on winning a number of new programs which are currently in a competitive phase or are expected to be during the next several years. These include the B-1 manned supersonic bomber which would replace the B-52 fleet in the late 1970s and is designed to deliver nuclear or non-nuclear payloads over long distances at low or high altitudes, using



Home for Supersonics: SST mockups and prototypes take shape in the expanded Developmental Center.

the latest advancements in penetration aids and electronic countermeasures; an Airborne Warning and Control System (AWACS), basically a large radar-equipped aircraft which would serve as a command and control center; a heavy lift helicopter, and a small helicopter required for the Navy's Light Airborne Multi-Purpose System. Proposals for B-1 and AWACS have been submitted and final awards are anticipated in the Spring.

New orders for commercial jet transports were down significantly in 1969. Airlines were affected by lower than anticipated traffic growth, continuing profitability reductions by reason of spiraling operational costs, uncertainties as to route awards for part of the year, increased competition on a number of routes, and the difficulty under the current tight money market in financing the substantial equipment commitments currently outstanding. As a result, certain airlines were forced to cancel orders and others of necessity delayed purchases.

Looking to 1970, there are a number of extremely critical areas. First, with 707, 727 and 737 production rates falling, with manpower requirements for 747 production decreasing as program efficiency improves, with order activity on all models of jet transports at a low level, and with government program activity continuing to decline, it was mandatory that drastic work force reductions be undertaken and that all expenditures not required to perform existing contractual commitments or to exploit effectively new business opportunities be curtailed. This we are doing. During 1969, the company's total work force was reduced by 25,576 persons and this trend continued into 1970. During the first two months of this year, a further reduction of 15,000 persons occurred. Simultaneously, major cost reduction programs, commenced throughout the company last year, were accelerated.

Secondly, it is vital that new orders for all commercial jet models and new government contract awards be obtained. The demand for commercial aircraft is governed primarily by traffic growth which in turn generates earnings which provide a base for airlines to finance the purchases. Since traffic growth is tied directly to economic growth, it is highly important that the administration achieve its objective of eliminating existent inflationary pressures and re-establish a sound economic growth trend at the earliest possible date. The company's success with

respect to new government program contract awards is dependent on its ability to submit sound competitive proposals.

Finally, by reason of lower earnings levels, lower advance payment receipts attributable to the substantial reduction in order activity for all models of jet transports, the inability of certain airlines to pay for airplanes on firm order, and a continued high level of inventory investment on the 747 program, it will be necessary for the company to arrange for additional financing and to revise existing bank credit agreements. The form of the additional financing and the terms and conditions thereof are under discussion with the company's bankers.

Based on current estimates of the 747 market and program costs and current estimates with respect to the company's other programs, 1970 earnings should improve over those for 1969.

Although the company is faced with difficult near term problems, the underlying strengths are such that the future may be viewed with confidence. We have a strong and capable organization with the demonstrated ability to handle large, complex aerospace programs. We have an aerospace plant and equipment complex superior to any in the industry. We have a family of jet transports which is competitive for the substantial market that all projections of passenger and freight traffic growth indicate will exist in the decade of the 70s. We have the opportunity to compete for the B-1 and AWACS programs, as well as other programs that are expected to be placed in competition.

Our confidence in the future therefore is based on that fact that substantial opportunity exists in the market place in which the company operates and that we have the human and physical resources to capitalize on such opportunities.

*J. D. Wilson*  
President  
*T. M. Allen*  
Chairman of the Board

February 27, 1970



A 707, above clouds and mountains, makes test flight in preparation for service with airline.



## COMMERCIAL AIRCRAFT

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Delivery of the first 747 superjets, along with the dramatic first flight at Everett, Wash., a non-stop trip from Seattle to the Paris Air Show and late-year certification, highlighted the company's commercial jet transport activities during the year.

The first flight, on February 9, 1969, demonstrated the big airplane's superior handling characteristics, and subsequent operations of the five-plane test fleet bore out design projections. Early in the flight test program, the 747 exceeded 99 percent of the speed of sound.

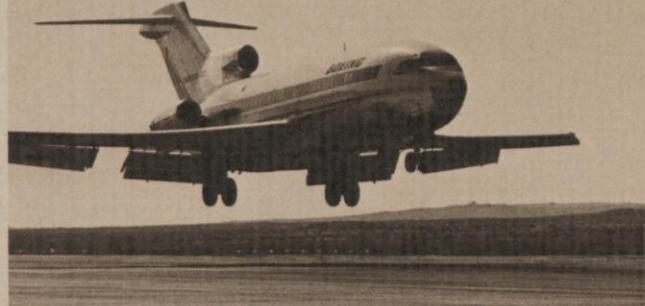
But as engine tests proceeded, both by the manufacturer on ground test stands and in flight, a slight distortion in engine cases was confirmed. This resulted in fuel consumption higher than predicted and in loss of thrust under hot weather conditions. Although it had no effect on safety, the problem caused the engine manufacturer to design a structural addition.

Late engine deliveries caused Boeing to announce in September that deliveries of thirty airplanes at the beginning of the production schedule would be delayed.

However, four airplanes were delivered for crew training and route proving in December. Awarding of a Federal Aviation Administration (FAA) certificate (allowing full airline use in passenger service) permitted the company to deliver the first fully certificated 747 to Pan American World Airways early in January, 1970, and start of commercial service on January 21, 1970, between New York and London. Also in early January, first engines incorporating the structural change were received. At the end of 1969, production rate was one airplane completed every four working days. A peak of seven planes a month is expected by Spring.

Eight customers placed additional orders for a total of 25 747s during 1969. Six airlines, after ordering the basic 747, changed to 747Bs, the 775,000 pound gross weight version, with longer range and higher payload. In March Lufthansa ordered the first 747 freighter.

## FINANCIAL REVIEW



### HIGHLIGHTS

	1969	1968
Sales . . . . .	\$2,834,585,000	\$3,273,980,000
Net earnings . . . . .	10,230,000	82,972,000
Dividends paid . . . . .	25,998,000	25,961,000
Net earnings per average share outstanding	\$.47	\$3.84
Dividends paid per share . . . . .	1.20	1.20
Percent net earnings to sales . . . . .	0.4%	2.5%
Shares outstanding at year end . . . . .	21,683,102	21,647,363
Stockholders' equity per share . . . . .	\$36.71	\$37.43
Salaries and wages . . . . .	\$1,321,700,000	\$1,411,394,000
Average number of employees . . . . .	120,500	142,400
Additions to property, plant and equipment	\$ 86,907,000	\$ 120,244,000
Depreciation and amortization of property, plant and equipment . . . . .	105,325,000	93,836,000
Backlog at year end . . . . .	\$5,182,800,000	\$5,176,300,000

## FINANCIAL REVIEW

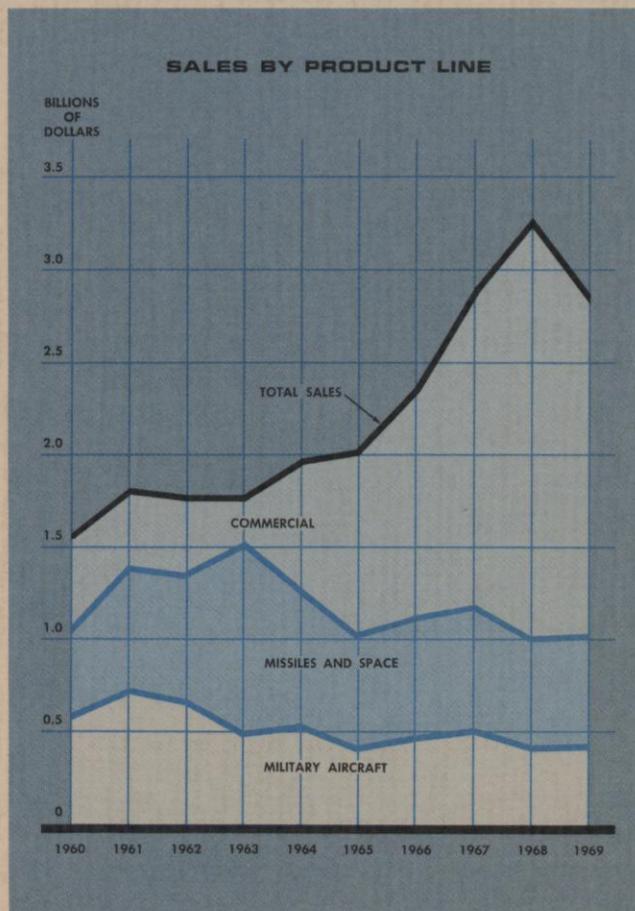
### SALES (in millions)

	1969	1968
Commercial . . . . .	\$1,822	\$2,267
Missiles and Space . . . . .	585	585
Military Aircraft . . . . .	428	422
	<u>\$2,835</u>	<u>\$3,274</u>

Total sales of \$2.8 billion in 1969 were approximately \$439 million lower than the record sales level reported in 1968. Included in the total is \$57 million relating to the supersonic transport program. The reduced sales volume is primarily attributable to the substantial reduction in 707 and 727 deliveries. Fifty-nine 707s and 115 727s were delivered in 1969 as compared to 111 707s and 160 727s in the prior year. In addition, 114 737s and the first four 747s were delivered. Deliveries of 737s in 1968 totaled 105.

Sales to the United States Government of just over \$1 billion in 1969 were approximately the same as for the prior year. Minuteman sales continued to decline and at \$184 million were approximately \$48 million below the 1968 level. Sales on the Apollo/Saturn program, after peaking in 1968, declined \$84 million in 1969 to a level of \$189 million. Sales of \$165 million on SRAM, the supersonic short-range attack missile program, were approximately \$122 million higher than the prior year. Sea Knight and Chinook helicopter sales of \$343 million were \$9 million lower and B-52 modification and maintenance sales of \$67 million were approximately \$26 million higher than reported in 1968.

Substantial deliveries of 747s will result in 1970 sales being well above the 1969 level. Current schedules call for the delivery of approximately 95 747s, 65 727s, 40 737s and 15 707s. The total — approximately 215 — compares with 292 deliveries in 1969. The large dollar value of the 95 747s, however, more than offsets the reduced number of unit deliveries.



Commercial jet transport orders received during 1969 included 25 747s, 64 727s, 32 737s and 12 707s. The lower level of new orders was attributable to the factors set forth in the preceding message to stockholders as well as competition afforded by the tri-engined air busses and the prospective offerings of new short and medium-range jet transport models by European manufacturers.

Sales to the United States Government in 1970 will be below those of 1969. Current programs and schedules provide for reduced sales levels on all programs. Sales from potential new government programs would not be great enough to offset the programmed reductions on established programs.

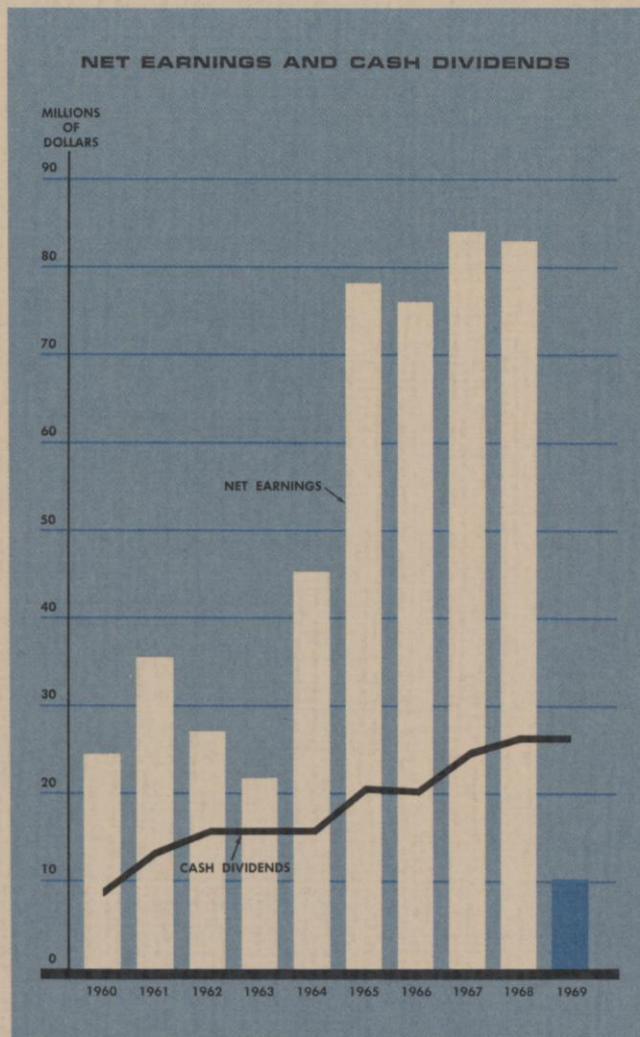
#### EARNINGS

	1969	1968
Net Earnings ( <i>in millions</i> )	\$10.2	\$83.0
Profit Margin . . . . .	0.4%	2.5%
Earnings per Share . . .	\$ 0.47	\$ 3.84

The causes of the reduced earnings in 1969 are set forth in the preceding message to stockholders.

The company charges against earnings on an incurred basis research, developmental and basic engineering and planning costs directly applicable to commercial jet transport programs. Administrative and general expenses incurred in support of commercial jet transport operations also are charged against earnings.

Although cost and schedule performance on government programs, with the exception of SRAM, was generally favorable, reduced sales volume, lower cost and performance incentive earnings, and heavy new business expenditures resulted in earnings below the 1968 level. As reported previously, state-of-the-art technical problems and development delays in SRAM-related weapons systems resulted in costs exceeding original estimates. Negotiations with respect to the research, design and test phase of the program



have not been concluded and therefore uncertainties still exist as to the financial results of that phase of the program.

The profitability of commercial jet transport programs, as reflected by reported annual earnings, is influenced by such factors as production rate and production cost trends, costs relating to model improvement programs and to the introduction of new models, and competitive conditions. These factors make forecasts of profitability from year to year most difficult. Such forecasts cannot be a straight extrapolation of previous trends but must take into consideration the effect on earnings of costs incurred and risks assumed in maintaining the company's competitive position in the free world jet aircraft market.

Design, development, flight testing and production activities on the 747 program were at a high level during the year. For the reasons previously stated, non-recurring costs and the cost of the initial production phase of the program were substantially above those projected at the beginning of the year and, as a consequence, no earnings were recorded on the delivery of the first four aircraft. The level of earnings to be reported on the 747 program in 1970 and subsequent years is dependent on the degree of success achieved in driving down production and other program costs, the level and timing of the product improvement effort required to maximize the market for the 747 and the number and timing of follow-on orders.

The start of construction on the SST prototypes in the latter part of 1969 will result in substantially increased expenditures in 1970. The company's share in the cost of the program is charged directly against earnings. Under the terms of the contract with the U.S. Government, the company shares in the costs to the extent of 10 percent up to a negotiated target cost of \$625 million and thereafter shares at a 25 percent level.

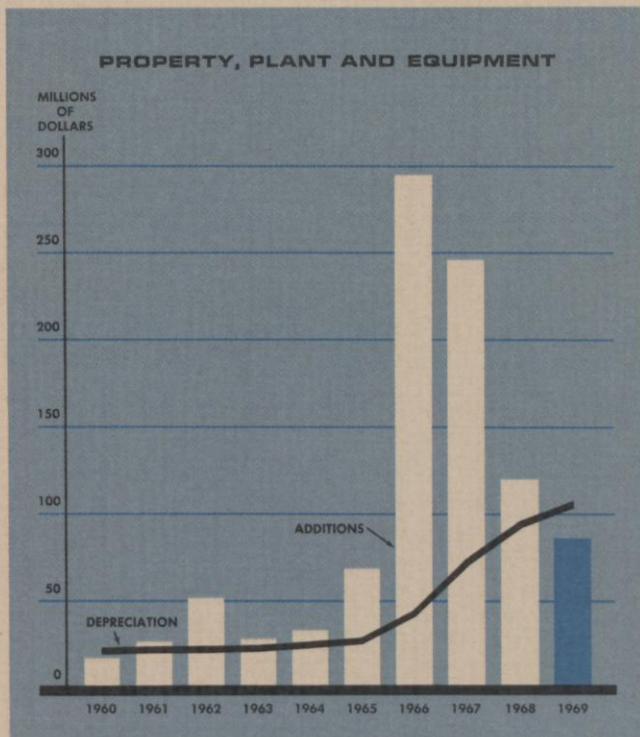
With overall borrowing requirements projected to continue at a high level, interest expense in 1970 will be correspondingly higher.

#### **FINANCIAL POSITION**

At year end, stockholders' equity in the company totaled \$796 million, long-term debentures and notes aggregated \$231 million, long-term bank debt amounted to \$401 million, and short-term bank loans totaled \$148 million. Working capital at year end amounted to \$610 million.

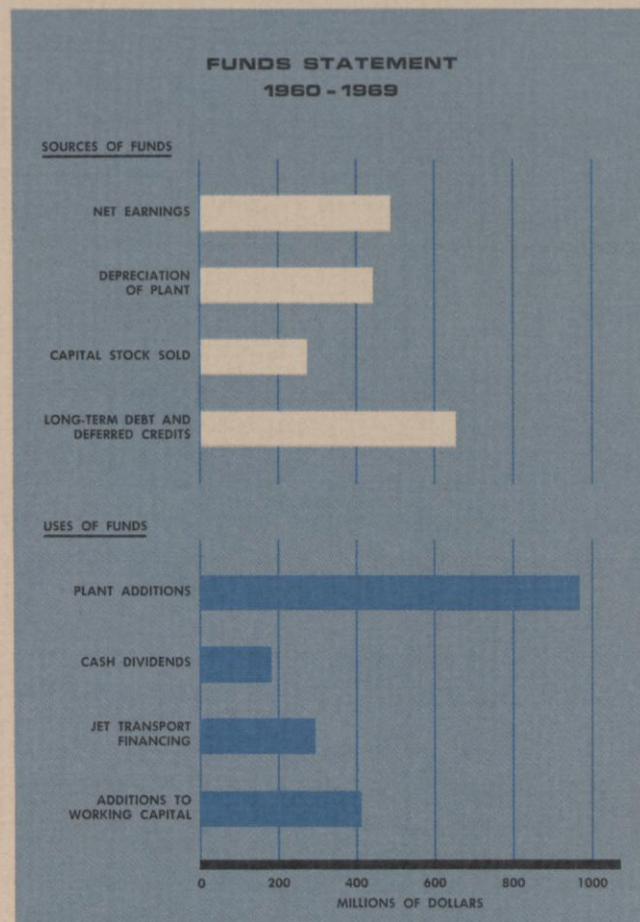
During the year, the company's commercial bank credit arrangements were expanded and are now covered by four agreements. The first agreement, which was fully utilized at year end, covers a \$209 million revolving credit which provides for the extension of that amount of credit to the company through December 31, 1970, at which time the outstanding borrowings become a term loan payable over a three-year period. The second agreement covers a \$209 million credit which provides for the banks to continue such line of credit for a 12-month period, with the provision that unless the company is otherwise notified, such commitment will, on a weekly basis, be extended for an additional 12-month period. The agreement provides for payment of all outstanding borrowings on December 29, 1971. Borrowings under this credit agreement were \$146.3 million at December 31, 1969.

The third agreement is a short-term revolving credit for \$150 million under which outstanding borrowings are payable on September 30, 1970. This credit was not being utilized at year end. The last bank credit agreement covers borrowings of Boeing Financial Corporation. This corporation is a wholly-owned subsidiary, established to assist in financing commercial aircraft. Under this agreement, Series A notes aggregating \$225 million, which provide for quarterly payments of \$8 million over a seven-year period, were issued during the year. The agreement further provides for an additional \$37 million under a revolving credit until June 30, 1970, at which time Series B notes payable equal to the amount then outstanding will be issued. Such notes will be payable in equal quarterly amounts over a six-year period. At December 31, there was \$209 million



of Series A notes outstanding and \$17 million had been borrowed under the Series B note portion of the agreement.

Working capital increased approximately \$143 million during 1969, primarily reflecting increased inventory buildup on the 747 program. With internally generated funds, net of cash dividends, somewhat below requirements for plant and equipment expenditures and additional long-term notes receivable, long-term debt was increased to provide the additional working capital needed. Allowance for depreciation exceeded facilities additions for the first time since 1960 and resulted in the company's net investment in plant and equipment decreasing \$18 million to \$609 million at year end. Jet transport financing, which includes long-term notes receivable from customer airlines and the depreciated book cost of leased aircraft, totaled \$298 million at year end, approximately the same level as the prior year. An increase of \$20 million in long-term notes receivable was largely offset by the decreased book value of leased aircraft.



#### BACKLOG (in millions)

	1969	1968
Commercial . . . . .	\$4,698	\$4,464
Missiles and Space . . . . .	229	349
Military Aircraft . . . . .	256	363
	<u>\$5,183</u>	<u>\$5,176</u>

Total unfilled order backlog at the end of 1969 was up slightly from the previous year end. Backlog of unfilled commercial orders increased by approximately \$234 million while the government order backlog decreased about \$227 million.

Government order backlog is limited to amounts obligated to contracts by the procuring agencies. If recognition were given to unfunded amounts believed to be firmly established in Department of Defense and NASA procurement plans, unfilled orders would be significantly increased.

**TEN YEAR COMPARATIVE FINANCIAL DATA**

Dollars (other than per share amounts) in millions

**SALES, EARNINGS AND DIVIDENDS**

	SALES	EARNINGS BEFORE INCOME TAXES		NET EARNINGS			CASH DIVIDENDS	
		AMOUNT	% OF SALES	AMOUNT	% OF SALES	PER SHARE	AMOUNT	PER SHARE
1969	\$2,835	(\$ 14.3)	(0.5)	\$10.2	0.4	\$0.47	\$26.0	\$1.20
1968	3,274	149.6	4.6	83.0	2.5	3.84	26.0	1.20
1967	2,880	144.4	5.0	83.9	2.9	4.10	24.6	1.20
1966	2,357	140.6	6.0	76.1	3.2	4.13	20.2	1.10
1965	2,023	149.6	7.4	78.3	3.9	4.84	20.3	1.25
1964	1,969	89.0	4.5	45.3	2.3	2.82	16.0	1.00
1963	1,771	44.9	2.5	21.7	1.2	1.35	16.0	1.00
1962	1,769	56.3	3.2	27.2	1.5	1.70	16.0	1.00
1961	1,801	73.9	4.1	35.7	2.0	2.23	13.5	.85
1960	1,555	51.8	3.3	24.5	1.6	1.53	9.1	.57

**FINANCIAL POSITION DATA**

	WORKING CAPITAL	LONG- TERM NOTES	LEASED AIRCRAFT	PLANT AND EQUIPMENT		LONG-TERM DEBT AND DEFERRED CREDITS	STOCKHOLDERS' EQUITY	
				AT COST	NET		AMOUNT	PER SHARE
1969	\$610	\$228	\$ 71	\$1,106	\$609	\$726	\$796	\$36.71
1968	467	208	90	1,032	628	587	810	37.43
1967	358	249	114	915	601	574	752	34.80
1966	434	124	86	672	426	513	564	28.91
1965	266	20	14	380	172	104	372	22.70
1964	255	1	29	315	130	113	306	19.06
1963	245	9	17	285	121	117	276	17.24
1962	197	13	10	261	115	66	270	16.89
1961	178	25	32	214	86	65	258	16.19
1960	199	17	8	189	81	71	236	14.81

Notes: All per share data for prior years adjusted to reflect two-for-one stock split in 1966.

Net earnings per share based on the average number of shares outstanding during each year.

PRINCIPAL SOURCES AND USES OF FUNDS

SOURCES				USES				
NET EARNINGS	DEPRECIATION OF PLANT	CAPITAL STOCK SOLD	LONG-TERM DEBT AND DEFERRED CREDITS	CASH DIVIDENDS	ADDITIONS TO PLANT	INCREASED AIRCRAFT FINANCING	INCREASED WORKING CAPITAL	
\$10.2	\$105.3	\$ 1.4	\$139.7	\$26.0	\$ 86.9	\$ 0.6	\$143.5	1969
83.0	93.8	1.8	12.2	26.0	120.2	(65.2)	108.7	1968
83.9	72.3	128.6	62.3	24.6	246.5	153.0	(76.0)	1967
76.1	40.2	135.9	408.4	20.2	294.6	176.2	167.5	1966
78.3	25.5	7.3	(8.7)	20.3	67.8	3.7	11.3	1965
45.3	24.7	0.8	(4.1)	16.0	33.6	4.5	9.6	1964
21.7	21.6	0.7	51.3	16.0	28.2	3.1	48.2	1963
27.2	21.0	0.3	1.0	16.0	50.1	(34.7)	19.0	1962
35.7	20.6	0.2	(5.9)	13.5	26.8	32.4	(20.7)	1961
24.5	19.4	-	-	9.1	17.4	22.3	(4.7)	1960

GENERAL INFORMATION

SHARES OUTSTANDING	BACKLOG	FLOOR AREA (In Million Square Feet)			EMPLOYEES			
		BOEING OWNED	LEASED	GOV'T OWNED	AVERAGE NUMBER	SALARIES AND WAGES		
21,683,102	\$5,183	25.1	3.8	10.4	120,500	\$1,322	1969	
21,647,363	5,176	24.7	4.1	10.7	142,400	1,411	1968	
21,597,356	5,893	22.9	4.3	10.7	142,700	1,305	1967	
19,496,519	5,283	19.9	3.6	10.6	128,500	1,148	1966	
16,374,280	3,148	12.5	2.5	11.4	93,400	813	1965	
16,073,972	1,844	11.3	2.1	11.2	90,900	758	1964	
16,025,136	1,815	11.1	2.0	11.2	100,400	803	1963	
15,984,752	1,620	10.8	2.3	10.8	104,100	768	1962	
15,964,860	1,869	7.2	1.9	11.8	89,800	629	1961	
15,943,294	2,139	6.6	1.7	11.4	81,700	556	1960	

## ASSETS

	<i>December 31,</i>	
	<i>1969</i>	<i>1968</i>
<b>CURRENT ASSETS:</b>		
Cash . . . . .	\$ 81,205,000	\$ 58,352,000
Amounts receivable under United States Government contracts . . . . .	86,810,000	99,648,000
Refundable taxes on income - Note 2 . . . . .	9,647,000	
Other accounts and notes receivable - Note 3 . . . . .	105,334,000	61,101,000
Inventories - Note 1 . . . . .	1,395,565,000	1,024,145,000
Prepaid expenses . . . . .	11,967,000	12,882,000
<b>Total Current Assets . . . . .</b>	<b>\$1,690,528,000</b>	<b>\$1,256,128,000</b>
 <b>LONG-TERM NOTES RECEIVABLE - Note 3 . . . . .</b>	<b>\$ 227,554,000</b>	<b>\$ 207,532,000</b>
 <b>LEASED AIRCRAFT</b> , at cost, less accumulated depreciation: 1969, \$69,582,000; 1968, \$54,983,000 - Note 3 . . . . .	\$ 70,901,000	\$ 90,329,000
 <b>OTHER ASSETS AND DEFERRED CHARGES</b>	\$ 4,244,000	\$ 4,495,000
 <b>PROPERTY, PLANT AND EQUIPMENT</b> , at cost:		
Land . . . . .	\$ 26,519,000	\$ 26,445,000
Buildings . . . . .	519,277,000	494,850,000
Machinery and equipment . . . . .	547,841,000	483,389,000
Construction in progress . . . . .	11,967,000	27,076,000
Less accumulated depreciation and amortization . . . . .	(496,387,000)	(404,125,000)
	<hr/>	<hr/>
	\$ 609,217,000	\$ 627,635,000
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	\$2,602,444,000	\$2,186,119,000
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See notes to consolidated financial statements.

**BALANCE SHEET****LIABILITIES AND STOCKHOLDERS' INVESTMENT***December 31,*

	<i>1969</i>	<i>1968</i>
<b>CURRENT LIABILITIES:</b>		
Notes payable to banks - Note 3 . . . . .	\$ 148,253,000	\$ -
Accounts payable . . . . .	736,150,000	594,013,000
Salaries and wages, taxes, and other accrued expenses . . . . .	155,706,000	171,155,000
Federal taxes on income - Note 2 . . . . .		9,269,000
Current portion of long-term debt . . . . .	39,952,000	14,690,000
<b>Total Current Liabilities</b> . . . . .	<u>\$1,080,061,000</u>	<u>\$ 789,127,000</u>
 <b>DEFERRED TAXES ON INCOME</b> - Note 2 . . . . .	\$ 25,100,000	\$ 47,939,000
<b>DEFERRED INVESTMENT CREDIT</b> - Note 2 . . . . .	\$ 68,800,000	\$ 68,200,000
<b>LONG-TERM DEBT</b> , less current portion - Note 3 . . . . .	\$ 632,467,000	\$ 470,492,000
 <b>STOCKHOLDERS' EQUITY:</b>		
Capital stock, par value \$5 a share -		
Authorized, 30,000,000 shares		
Issued and outstanding at stated value: 1969, 21,683,102 shares; 1968, 21,647,363 shares - Note 5 . . . . .	\$ 447,040,000	\$ 445,617,000
Retained earnings . . . . .	348,976,000	364,744,000
	<u>\$ 796,016,000</u>	<u>\$ 810,361,000</u>
	<u><u>\$2,602,444,000</u></u>	<u><u>\$2,186,119,000</u></u>

**CONSOLIDATED STATEMENT OF  
NET EARNINGS AND RETAINED EARNINGS**

*Year ended December 31,*

	<i>1969</i>	<i>1968</i>
Sales . . . . .	\$2,834,585,000	\$3,273,980,000
Other income . . . . .	32,417,000	30,772,000
	<hr/>	<hr/>
	\$2,867,002,000	\$3,304,752,000
Costs and expenses – Notes 1 and 4 . . . . .	\$2,832,527,000	\$3,121,728,000
Interest and debt expense . . . . .	48,745,000	33,452,000
	<hr/>	<hr/>
	\$2,881,272,000	\$3,155,180,000
<b>EARNINGS (LOSS) BEFORE TAXES . . . . .</b>	<b>\$ (14,270,000)</b>	<b>\$ 149,572,000</b>
Federal taxes on income (tax credits) – Note 2 . . . . .	(24,500,000)	66,600,000
	<hr/>	<hr/>
<b>NET EARNINGS . . . . .</b>	<b>\$ 10,230,000</b>	<b>\$ 82,972,000</b>
Retained earnings, January 1 . . . . .	364,744,000	307,733,000
Cash dividends paid, \$1.20 per share . . . . .	(25,998,000)	(25,961,000)
	<hr/>	<hr/>
Retained earnings, December 31 . . . . .	\$ 348,976,000	\$ 364,744,000
	<hr/>	<hr/>
Earnings per share . . . . .	\$ .47	\$3.84

See notes to consolidated financial statements.

**CONSOLIDATED STATEMENT OF  
SOURCES AND USES OF FUNDS**

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*Year ended December 31,*

	1969	1968
<b>SOURCES OF FUNDS:</b>		
Net earnings . . . . .	\$ 10,230,000	\$ 82,972,000
Depreciation -		
Plant and equipment . . . . .	105,325,000	93,836,000
Leased aircraft . . . . .	16,901,000	20,603,000
Proceeds from sale of capital stock . . .	1,423,000	1,758,000
Increase (decrease) in long-term debt . .	161,975,000	(10,020,000)
	<hr/>	<hr/>
	\$295,854,000	\$189,149,000
<b>USES OF FUNDS:</b>		
Additions to plant and equipment, net . .	\$ 86,907,000	\$120,244,000
Increase (decrease) in aircraft financing -		
Long-term notes receivable . . . . .	20,022,000	(41,169,000)
Leased aircraft . . . . .	(2,527,000)	(3,418,000)
Decrease (increase) in deferred credits .	22,239,000	(22,216,000)
Cash dividends . . . . .	25,998,000	25,961,000
Other . . . . .	(251,000)	997,000
	<hr/>	<hr/>
	\$152,388,000	\$ 80,399,000
<b>NET INCREASE IN WORKING CAPITAL . . .</b>	<b>\$143,466,000</b>	<b>\$108,750,000</b>
	<hr/>	<hr/>

See notes to consolidated financial statements.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1-INVENTORIES:**

Work-in-process on government fixed-price incentive type contracts is stated at the total of direct costs and overhead applicable thereto, less the estimated average cost of deliveries based on the estimated total cost of the contracts. Work-in-process on straight fixed-price contracts is stated in the same manner, except that applicable research, developmental, administrative, and other general expenses are charged directly to earnings as incurred. Basic engineering and planning costs applicable to commercial jet transport programs are also charged directly to earnings. At December 31, 1969, work-in-process aggregated \$2,797,755,000, less advances and progress payments of \$1,496,011,000.

To the extent that estimated program costs, determined in the above manner, are expected to exceed total sales price, charges are made to current earnings in order to reduce work-in-process to estimated realizable value.

Commercial spare parts and general stock materials, aggregating \$93,821,000, are stated at average cost, not in excess of realizable value.

**Note 2-FEDERAL INCOME TAXES:**

Investment tax credit is being deferred and amortized ratably over the lives of the applicable assets. Federal taxes on income (tax credits) include \$17,000,000 in 1969 and \$12,600,000 in 1968 of credits representing amortization of investment credit.

Deferred taxes on income (principally arising in prior years from installment sales of commercial aircraft) have been reduced at December 31, 1969 by \$18,600,000 of the deferred investment tax credit reportable in future years' income tax returns under the revised carryforward provisions of the Internal Revenue Code.

Income taxes have been settled with the Internal Revenue Service for all years through 1966. Adequate provision for income taxes is believed to have been made for the years 1967 through 1969.

**Note 3-NOTES PAYABLE AND LONG-TERM DEBT:**

Short-term notes payable aggregating \$146,300,000 are payable to a group of banks under agreements providing a line of credit which currently aggregates \$359,000,000. The notes bear interest at the prime commercial bank rate (currently 8½%). In addition, commitment fees of ¼% to ½% are charged for the unused portion of the credit line.

Long-term debt consists of the following:

	<i>December 31,</i>	
	<i>1969</i>	<i>1968</i>
Revolving Credit		
notes . . . . .	\$209,000,000	\$200,000,000
Term Loan and		
Credit Agreement .	225,929,000	
6½ % notes payable .	175,000,000	175,000,000
5% notes payable . .	39,000,000	41,750,000
5% Sinking Fund		
Debentures . . . . .	18,394,000	21,583,000
Other notes . . . . .	5,096,000	46,849,000
Less current		
maturities . . . . .	(39,952,000)	(14,690,000)
	<hr/> <u>\$632,467,000</u>	<hr/> <u>\$470,492,000</u>

Under a Revolving Credit Agreement with a group of banks, the outstanding balance at December 31, 1970 is payable over the three-year period ending December 31, 1973. These notes bore interest at the prime rate until December 31, 1969, and thereafter at ¼% above such rate. Borrowings under the agreement may be prepaid at any time without penalty.

During the year Boeing Financial Corporation, a wholly-owned subsidiary, entered into a Term Loan and Credit Agreement with a group of banks. At December 31, 1969, additional credit of \$20,000,000 is available under the agreement. The collateral for the balance outstanding at December 31, 1969 is limited to \$250,231,000 of notes receivable and \$57,291,000 of leased aircraft included in the consolidated balance sheet. The notes evidencing the loan are payable in quarterly installments aggregating \$8,036,000 until

September 30, 1970 and increasing thereafter. The notes bear interest at  $\frac{1}{4}\%$  above the prime rate prior to July 1, 1972 and thereafter at  $\frac{1}{2}\%$  above such rate.

The 6 $\frac{3}{8}\%$  notes, maturing in 1986, are payable to a group of institutional lenders. Required annual sinking fund payments commencing in 1971 are \$10,750,000.

The 5% notes, maturing in 1983, are payable to an insurance company in annual installments of \$2,750,000.

Sinking fund requirements under the 5% Sinking Fund Debentures, due in 1978, are \$2,700,000 annually. Debentures aggregating \$2,706,000 have been reacquired and may be applied against future sinking fund requirements.

The other notes bear interest at 6% to 8%, and are payable in installments over various periods through 1977.

The company has complied with all of the restrictive covenants contained in the various debt agreements.

#### Note 4—OPERATING CHARGES:

The following charges were incurred in the years ended December 31:

	<u>1969</u>	<u>1968</u>
Depreciation and amortization of plant and equipment (principally sum-of-the-years-digits method)	\$105,325,000	\$93,836,000
Depreciation of leased aircraft (sum-of-the-years-digits method)	16,901,000	20,603,000
Retirement plans	36,336,000	38,529,000

The company has several retirement plans covering substantially all employees. The company's policy is to accrue current pension costs. Substantial increases during 1969 in current pension costs, resulting from modifications to the plans providing increased bene-

fits and employee eligibility, were largely offset by credits from prior years' accruals resulting from revised actuarial methods.

#### Note 5—CAPITAL STOCK:

Changes in capital stock during the year were as follows:

	<u>Shares</u>	<u>Amount</u>
Balance at January 1, 1969 . . . . .	21,647,363	\$445,617,000
Shares sold to officers and employees—		
Under incentive compensation plan . . .	27,575	1,279,000
Under stock option plan . . . . .	8,164	144,000
Balance at December 31, 1969 . . . . .	<u>21,683,102</u>	<u>\$447,040,000</u>

At December 31, 1969, options for 192,877 shares of the company's stock, at prices ranging from \$19.87 to \$71.00, were outstanding, of which 70,677 shares were exercisable. During 1969, no options for additional shares were granted and options for 5,113 shares were canceled. Options for 650,000 shares may be granted under the present stock option plan.

#### Note 6—CONTINGENT LIABILITIES:

Substantially all of the company's contracts with the government are subject to renegotiation under the Renegotiation Act of 1951. Renegotiation Board proceedings for all years through 1965 have been concluded. The company does not know and cannot predict what the board's actions will be for 1966 and subsequent years. In view of this uncertainty, and the belief of the company that no excessive profits were realized, no provision for renegotiation refund has been made for these years.

The company is engaged in various legal proceedings which in some instances involve claims for substantial amounts. Most of these claims are covered by insurance, and the company does not anticipate that the amounts, if any, which may be required to be paid by the company will be material.

### ACCOUNTANTS' REPORT

TOUCHE ROSS & CO.

1212 IBM BUILDING  
SEATTLE, WASHINGTON 98101

February 27, 1970

Board of Directors  
The Boeing Company  
Seattle, Washington

We have examined the accompanying consolidated balance sheet of The Boeing Company and subsidiaries as of December 31, 1969, and the related statements of net earnings and retained earnings and sources and uses of funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the consolidated financial position of The Boeing Company and subsidiaries at December 31, 1969, the results of their operations, and the sources and uses of funds for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

*Touche Ross + Co.*  
Certified Public Accountants

Directors of The Boeing Company  
(left to right): J. E. Prince, H. W.  
Haynes, W. L. Campbell, William  
G. Reed, John O. Yeasting, William  
M. Batten, William M. Allen, T. A.  
Wilson, Lowell P. Mickelwait, Ed-  
ward C. Wells, Thomas R. Wilcox,  
George H. Weyerhaeuser, Craw-  
ford H. Greenewalt, D. E. Skinner.

## DIRECTORS AND OFFICERS

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*President*

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SST Division*

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*Controller*

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Commercial Airplane Group*

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*Vice Pres.-Gen. Mgr.  
747 Division*

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*Vice Pres. - Operations*

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*Vice Pres. - Product Development  
Commercial Airplane Group*

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*Treasurer*

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*Vice Pres. - Operations  
Vertol Division*

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*Vice Pres. - Administration  
and Secretary*

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*Chairman,  
Simpson Timber Company*

GEORGE S. SCHAIRER  
*Vice Pres. - Research  
and Development*



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*Skinner Corporation*

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Vice Pres.-Gen. Mgr.  
*Wichita Division*

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*707/727 Division*

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*Commercial Airplane Group*

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Vice Pres. - Requirements & Marketing  
*Commercial Airplane Group*

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Group Vice President  
*Aerospace Group*

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*Vertol Division*

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Vice Pres.-Gen. Mgr.  
*Military Airplane Systems Division*

R. W. THARRINGTON  
Vice Pres.-Gen. Mgr.  
*Vertol Division*

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Vice Pres. - Finance & Contracts  
*Commercial Airplane Group*

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Senior Vice President

\*GEORGE H. WEYERHAEUSER  
President,  
*Weyerhaeuser Company*

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Vice Pres.-Gen. Mgr.  
*707/727 Division*

\*THOMAS R. WILCOX  
Vice Chairman,  
*First National City Bank*

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Vice Pres. - Sales  
*Commercial Airplane Group*

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Vice Pres.-Gen. Mgr.  
*SST Division*

LYSLE A. WOOD  
Vice Pres. - Customer Requirements

\*J. O. YEASTING  
Former Senior Vice President

W. JEROME KANE  
*Boeing International Corporation, Vice President-Gen. Mgr.*

BRANTZ MAYOR  
*Boeing International Corporation, Vice President - Europe*

\*Director

*The Boeing Company is composed of an administrative headquarters organization, two product groups and twelve operating divisions.*

*Corporate headquarters and the Military Airplane Systems division are at Seattle, Washington.*

*The Aerospace Group, its Missile and Aerospace Systems divisions, plus an Aerospace Operations organization and Spacecraft, Navy Systems and Airborne Warning and Control System branches, are headquartered at Kent, Washington. Headquarters of the Southeast division, also part of this group, are at Houston, Texas.*

*Headquarters of the Commercial Airplane Group and of its 707/727 and Engineering and Operations divisions are at Renton, Washington, while its SST and 737 divisions are at Seattle and its 747 division at Everett, Washington. The Fabrication and Services division is at Auburn, Washington.*

*The Wichita division is at Wichita, Kansas; and the Vertol division near Philadelphia, Pennsylvania.*

*The company has four wholly-owned subsidiaries: The Boeing International Corporation; the Boeing Financial Corporation, and the Boeing Equipment Holding Company, all with principal offices in Seattle, and Boeing of Canada, Ltd., with a division at Arnprior, Ontario, and another planned at Winnipeg, Manitoba.*

**GENERAL COUNSEL** PERKINS, COIE, STONE, OLSEN & WILLIAMS

**GENERAL AUDITORS** TOUCHE ROSS & Co.

**TRANSFER AGENT** FIRST NATIONAL CITY BANK, NEW YORK

**REGISTRAR** BANKERS TRUST COMPANY, NEW YORK

THE **BOEING** COMPANY

GENERAL OFFICES - 7755 EAST MARGINAL WAY SOUTH - SEATTLE, WASHINGTON 98124

The United States supersonic transport (SST) program entered a new phase late in 1969 when President Nixon signed a Department of Transportation appropriation bill including \$85 million for the start of prototype construction in 1970.

The President announced his decision to recommend construction of two SST prototypes on September 23 after an extensive reevaluation by his administration. The reevaluation came after the Federal Aviation Administration had validated the Boeing design submitted in January, 1969.

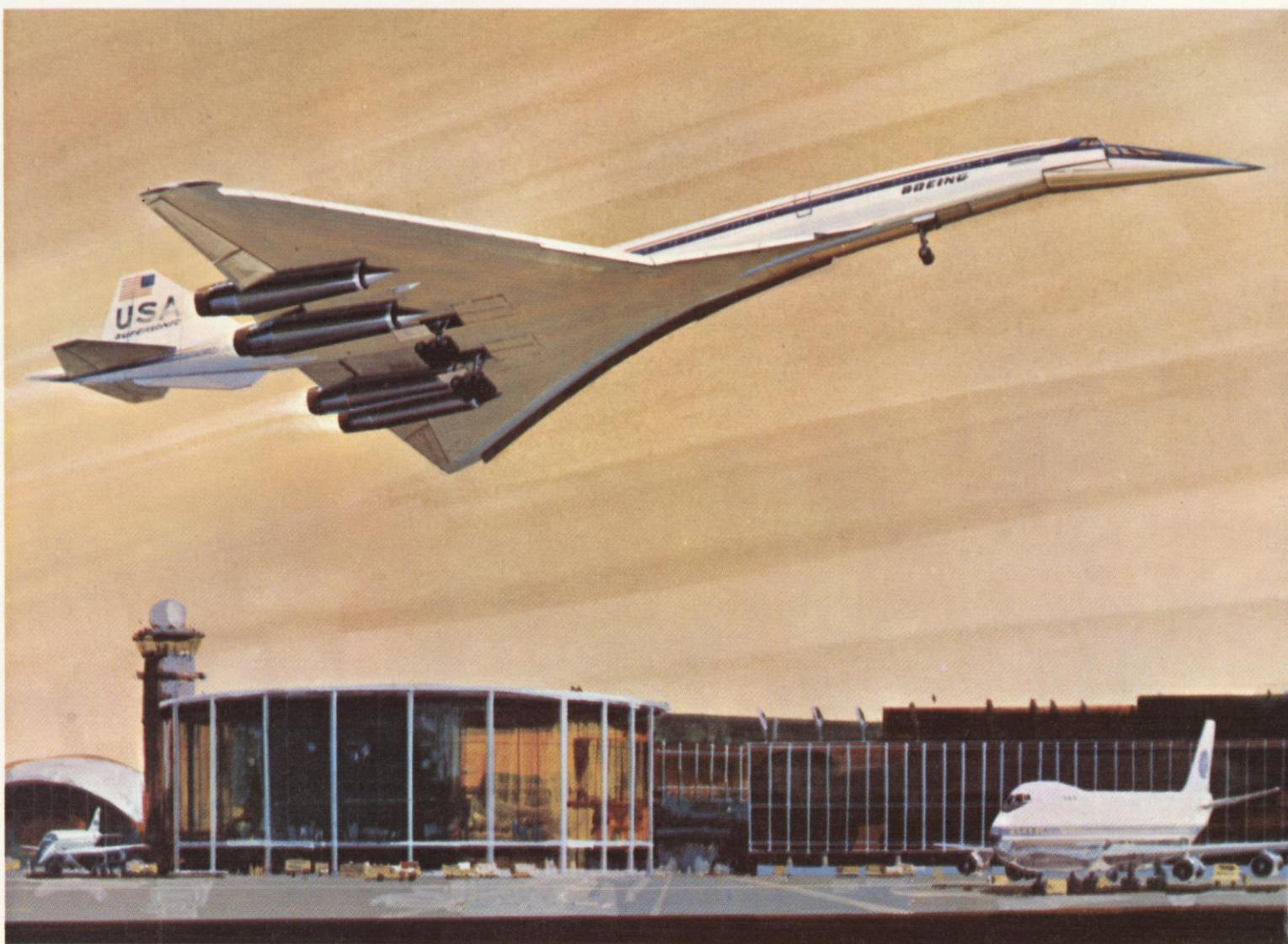
Built primarily of titanium, the SST prototypes will be about 286 feet long, more than 50 feet tall at the tail and have a wing span of nearly 142 feet. They will be powered by four General Electric engines, each generating up to 67,000 pounds of thrust. The design features a fixed delta wing with

wide span and advanced high-lift devices to provide low speed capability similar to subsonic jets operating today. The tail is conventional in appearance.

The prototypes will be assembled at the Boeing Developmental Center in Seattle, where Boeing has added more than \$20 million in new facilities for the SST. An extension to the high-bay area of the manufacturing building was completed in July. Work began in late 1969 on full-scale engineering mockups and some elements of this work have been completed. A metal mockup of the entire fuselage, the tail and one side of the wing of the airplane is scheduled for completion in mid-1970.

The SST structures design group has released engineering drawings to be used for parts fabrication. Structural drawing releases will continue through 1970 and into late 1971. About half of the

The American supersonic transport is shown in an artist's concept as it might appear in proximity to an airport and a 747 superjet awaiting loading.



airframe will be built by subcontractors and suppliers throughout the United States and shipped to Seattle for assembly.

At the peak of prototype construction in 1971, Boeing employment on the SST will approach 10,000. Another 10,000 will be employed by General Electric and the various subcontractors and suppliers to the program.

The first prototype is scheduled to roll out late in 1972, with first flight about the end of that year. The program calls for construction of production SSTs to begin late in 1973 after completion of the initial prototype flight test program. Production SSTs could enter commercial service in 1978.

Market projections for the 1978 to 1990 time period indicate more than 500 U.S. SSTs will be required to support the traffic demand on long-range, over-water routes. Based on a growth estimate of ten per cent each year, the market available to the SST in the early 1980s will be as large as the entire non-Communist traffic on all the world's air routes in 1968.

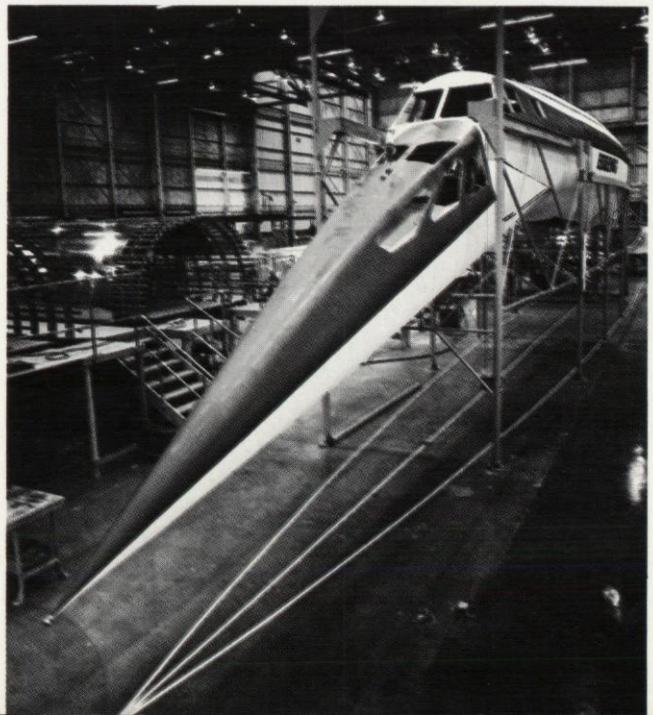
The composition of SST total operating costs is such that it is less sensitive to labor cost escalation than operating costs of subsonic jets. This characteristic will have a favorable effect on the SST's comparative economics when it becomes operational.

During the past year Boeing completed a comprehensive study of the operating economics of the SST in the 1978-1990 time period. The study shows that the SST's total operating costs will be competitive with the wide-body subsonics of a decade from now. This comes as a result of the SST's great productivity, which is nearly four times that of the 707 and nearly twice as great as the 747.

The study of the SST's operating economics involved a computer analysis of SSTs flying on 142 airline routes. These routes comprised the bulk of the international systems flown by the major carriers. The study assumed that U.S. SSTs would be delivered at a rate of five airplanes a month beginning in 1978 and the Concorde (the British-French SST entry) would be introduced at a rate of three airplanes a month beginning in 1973. It was assumed that SSTs would be restricted to overwater flights at supersonic speeds.

The U.S. SST will fly at altitudes of 60,000 to 70,000 feet at a cruise speed of about 1,800 miles an hour. At the beginning of 1970, twenty-six of the world's airlines had reserved delivery positions for 122 U.S. SSTs.

An aluminum, full-scale engineering mockup of the supersonic transport will be complete by summer.





The Tucumcari, water-jet-driven hydrofoil gunboat, has been tested by the U.S. Navy in Viet Nam, met and exceeded requirements for speed, heavy weather.

#### MILITARY PRODUCTS

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With sales on existing military programs projected to decrease over the next several years, still unannounced contract awards are extremely important to the company's future military systems business.

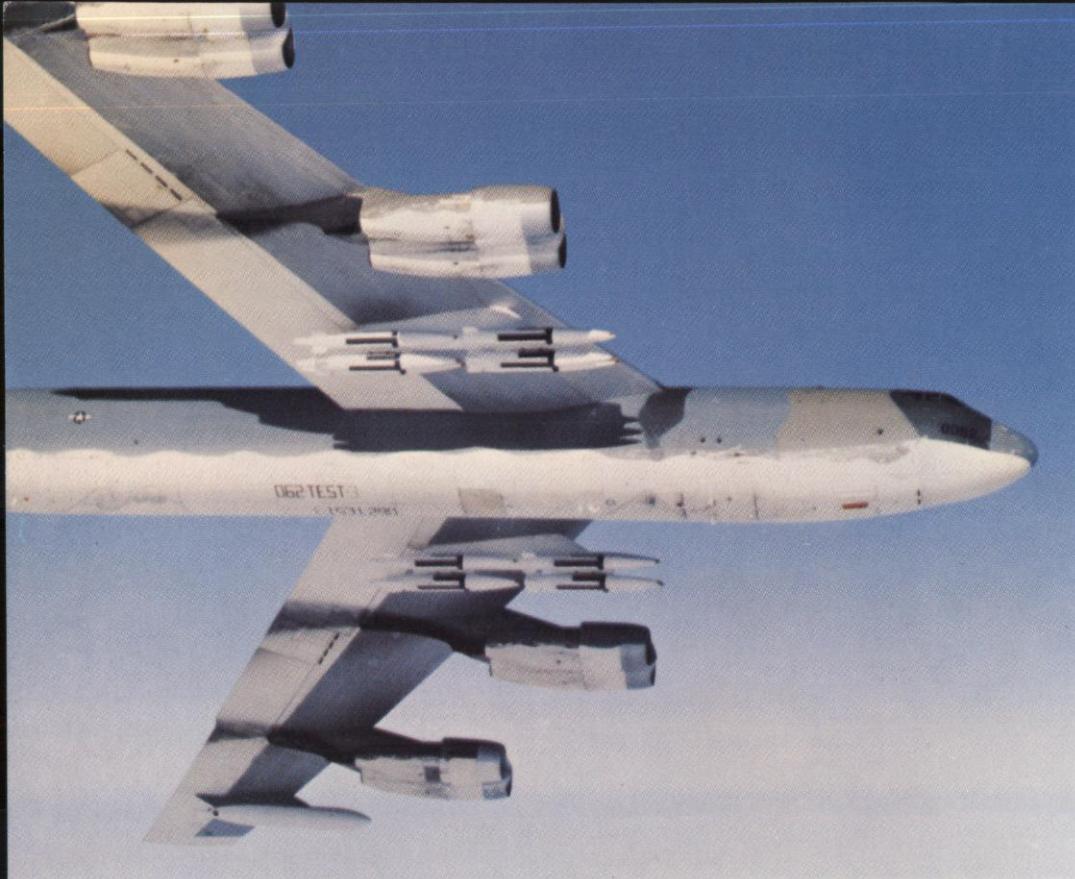
A highly important competition is for an advanced manned strategic aircraft, now designated as the B-1. This is the principal product objective of the Military Airplane Systems organization, Seattle, which devoted a major part of its effort during the year to preparations for a request for proposals from the U.S. Air Force. This request came in November, and the company's proposal packages were submitted during January and February, 1970. Selection of one airframe and one engine contractor to proceed with design, development, test and evaluation is expected later this year.

The airplane envisioned would replace the B-52 fleet in the late 1970s. It is required to penetrate enemy defenses supersonically either at high or low altitudes, to remain aloft for long periods on alert

status or to take off quickly from ground alert. Intercontinental range, sophisticated electronic countermeasures and the versatility to be effective either in major conflagrations or limited war situations are other requirements.

A second competition is the proposed Airborne Warning and Control System (AWACS). Basically, this is a large, radar-equipped aircraft which would serve as a command and control center for air defense and tactical forces. The company has been studying related systems for a decade.

In 1969, the U.S. Air Force released the AWACS request for proposal and this started one of the company's largest proposal efforts. More than 1,000 employees worked in detailing the Boeing design, based on an eight-engine version of the 707-320 intercontinental transport. The technical proposal, resulting from thousands of hours of laboratory and wind tunnel tests, was submitted in August, with management and cost proposals, requiring weeks of



B-52 jet bombers continue to provide aerial strength for U.S. forces in Southeast Asia and around world.



Minuteman is fired: modernization of intercontinental ballistic missile bases continues on schedule.

computer operations, following.

The proposal work was done under a \$17.5 million Air Force contract. At year end, the company was revising its proposal in accord with government program redirection. Selection of a prime contractor is expected in 1970.

In a separate but related activity, the company during the year completed the largest single-piece radome ever constructed. Built for the AWACS radar testing program, the laminated fiberglass structure, 29 feet wide, was installed at the antenna range at the Boeing Space Center at Kent, Washington.

Helicopter procurement slowed during the year and the Vertol factory near Philadelphia reduced its work force in proportion. Meanwhile the company actively sought new business in the field of heavy lift helicopters needed by both the Army and Navy. An appropriations bill passed by Congress, approving funds for two systems, nevertheless recommended strongly that the Department of Defense develop a single system to meet both requirements. Flight tests successfully demonstrated a new two-point cargo handling system which would allow a heavy lift helicopter to fly much faster than present helicopters while carrying cargo externally.

Production rates on the CH-47 (Chinook) and CH-46 (Sea Knight) helicopters have been cut drastically but production capability remains intact in case new contracts are awarded. Since 1965, Chinooks have flown 567,000 combat hours in Viet Nam during 1,827,000 sorties. Most of these have involved troop movements but versatility of the aircraft is demonstrated by the fact that more than 7,900 downed aircraft of all sorts, valued at \$2.1 billion, have been recovered by the CH-47. Sea Knight models flew 369,000 sorties in 1969, moving nearly 615,000 troops for the Marine Corps.

A CH-47 was demonstrated at the Paris Air Show in May and June of 1969 and subsequently was flown to other European points for additional demonstrations to military personnel of host countries. A BO-105 light, twin-turbine helicopter was shipped from Germany late in the year to begin demonstrations to the U.S. Navy for its proposed light airborne multi-purpose system program. Earlier, Boeing had completed negotiations with Messerschmitt-Bolkow-Blohm, of Munich, designers of this machine, allowing Boeing options to market or produce the BO-105 in parts of the western hemisphere. Boeing owns a minority interest in the German firm.



Sea Knight (CH-46) helicopters in Viet Nam flew 369,000 sorties in 1969, and moved 615,000 troops for U.S. Marines.



Boeing has obtained options to sell or produce BO-105, German-designed light helicopters, in United States.

Flight testing of Minuteman III, newest version of the Air Force's quick-response intercontinental ballistic missile, continued throughout 1969. Launches were made from both the Boeing Atlantic and Pacific Test Centers. Minuteman III has a larger third stage than Minuteman II, as well as a new re-entry system providing improved accuracy and payload.

Minuteman project personnel continued their unbroken record of on-time delivery of the missile installations with completion of force modernization of Malmstrom Air Force Base, Montana, in July. This involved replacing Minuteman I with Minuteman II in each installation and updating electronic equipment. Similar modernization will be done at Minot Air Force Base, North Dakota, during 1970.

At year end, the company was awarded a contract to study possibilities of designing future Minutemen as mobile strike weapons.

Flight testing of the Short Range Attack Missile (SRAM) began in the second half of 1969. The first SRAM, developed for the Air Force, was launched by a B-52 bomber over White Sands, New Mexico, in August. SRAM testing will continue into 1970. Funds for a production order of the missile

have been included in the President's budget but no production orders have been released by the Air Force.

The company received several Navy research contracts during 1969, involving technical support for a hydrofoil test operation on Puget Sound and conceptual designs of large military hydrofoil vehicles for major fleet use. The Tucumcari, Boeing-designed and built 57-ton heavy-weather hydrofoil gunboat, continued outstanding operations in Navy service. The Navy said the Tucumcari "has set unprecedented prototype performance and reliability records." Company personnel also are evaluating the potential of modern passenger carrying hydrofoils.

At Huntsville, Alabama, Boeing in 1969 built 43 sets of industrial prototype wings for the U.S. Army's Hawk missile and completed a six-month study of possible development of a Multiple Artillery Rocket System (MARS) as an intermediate range bombardment system for the 1970s. From studies made by five competing firms, the Army can select a baseline MARS concept and proceed with a contract definition phase. The company bid successfully for a tooling subcontract on the Navy's F-14 fighter aircraft and work is being done at the Vertol factory.

## SPACE PROGRAMS

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Boeing participation in The United States space program reached a climax in 1969 with the successful landings of astronauts on the moon. While manpower requirements decreased after these events, the company's intent to remain active in the nation's space explorations had several results:

The company won an industry-wide competition to design and build the lunar roving vehicle (LRV) to be carried first on a mission in late 1971. The Lunar Rover contract calls for four-wheeled vehicles to provide transportation for two astronauts, scientific equipment and lunar samples. To be carried to the moon in the storage bay of a lunar module, the Rover must survive blast-off vibrations, low-temperature flight and a lunar landing, then be maneuverable at variable speeds. Boeing's contract, valued at approximately \$19 million, calls for four flight vehicles, four test versions and one Rover for astronaut training.

The vehicle will accommodate a payload of 970 pounds. The driver will operate it much as he would on Earth, using a pistol grip hand control rather than a steering wheel, as the 400-pound vehicle moves forward or backward at variable speeds.

The Lunar Rover will be about 10 feet, 7 inches long, almost 6 feet wide, and have a 7.5 foot wheelbase. The four wheels will be individually powered by electric motors. Top speed will be almost 10 miles an hour on a relatively smooth surface, with power provided by two non-rechargeable batteries giving it an operational life on the moon of 54 hours during the lunar day, during which it will be able to make any number of sorties up to a total distance of 75 miles. Because of the limitations of the life support systems, however, the vehicle's range will be restricted to a radius of about three miles.

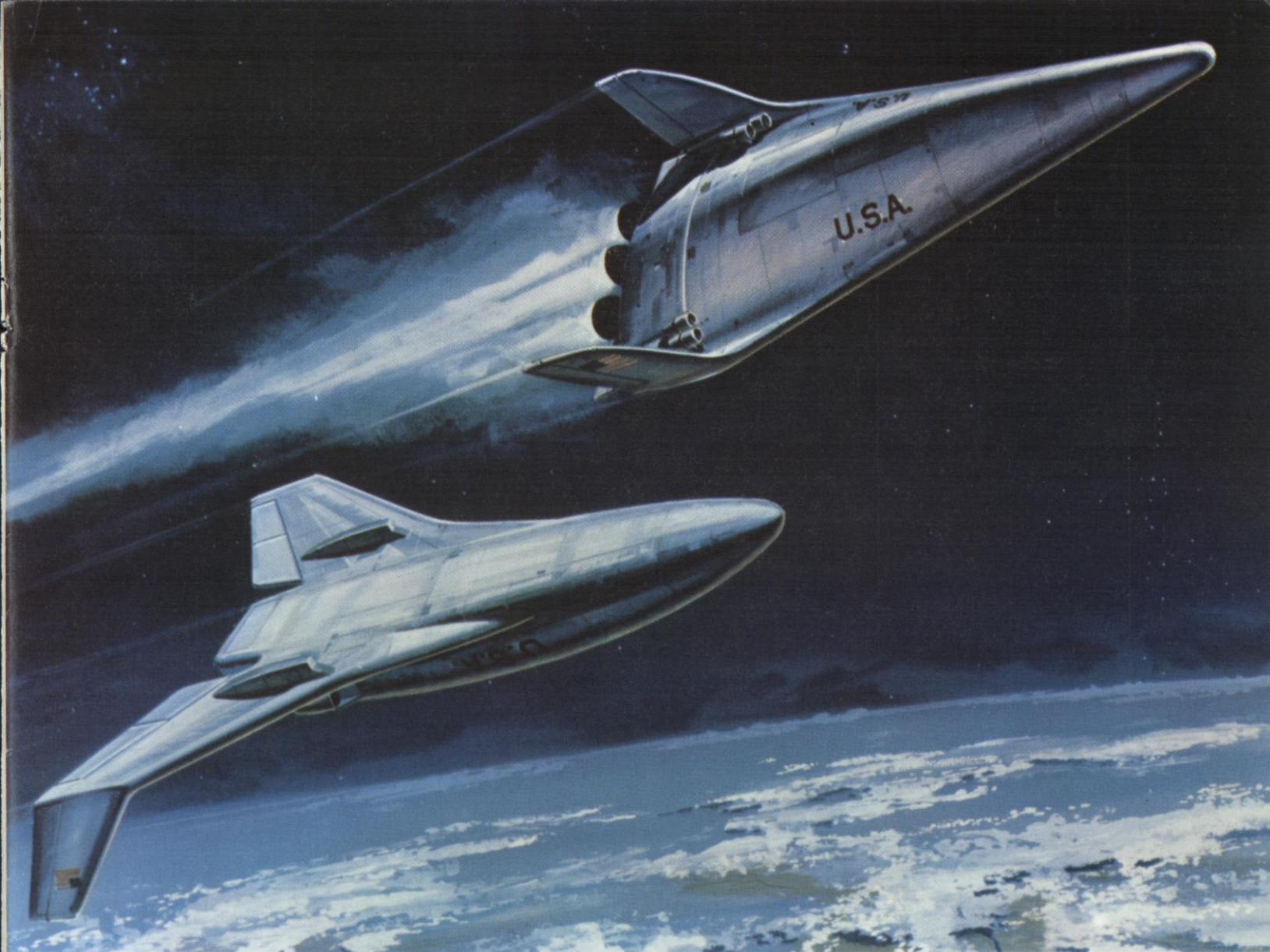
The LRV will be designed to negotiate from a standing start step-like obstacles one foot high, to cross 28-inch crevasses, to climb 25-degree slopes and to stop on 35-degree slopes.

In the Autumn of 1969, the company began intensive studies on NASA's proposed Space Shuttle craft, a chemically fuelled, reusable vehicle which would fly between Earth and a low-Earth orbit. The Space Shuttle project is a team effort with the Lockheed Missiles and Space Company to seek a NASA contract. As presently envisioned, the shuttle would consist of a large vehicle to provide initial boost and a smaller vehicle which could continue into orbit and perform space missions. The two would be launched locked together and would separate at about 160,000 feet. Each vehicle, after completing its task, would fly back to Earth for an airplane-like landing.

In August, the U.S. Air Force announced the company had been awarded an assignment to design, develop and deliver an improved version of Burner II. This new rocket is a two-stage version of the flight-proven upper stage space booster. Added power in the second stage of the new rocket will allow payloads to be boosted into higher earth orbits or larger payloads to be carried. The contract calls for delivery of six Burner IIA's and one ground test unit.

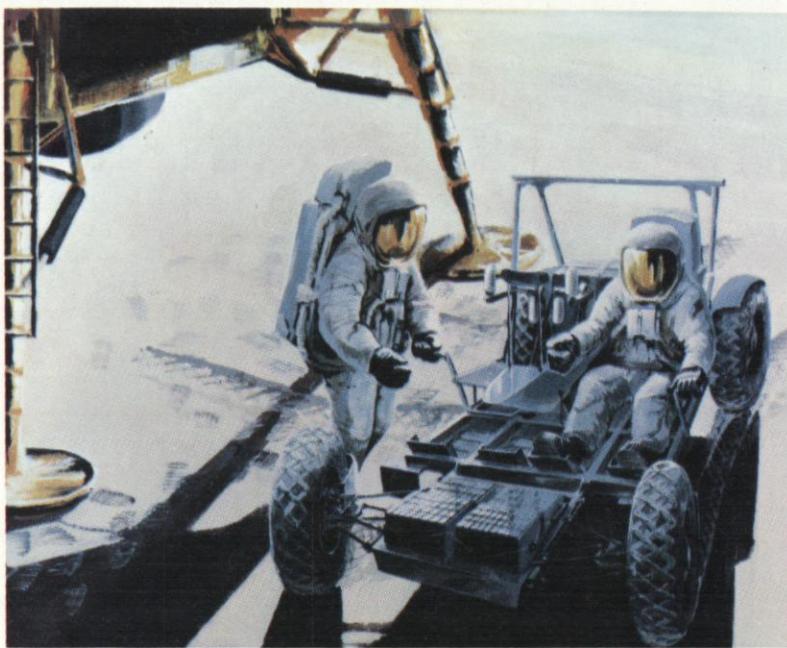
In a continuation of support work for the National Aeronautics and Space Administration Apollo program from the Huntsville, Alabama, facility, the company was granted a systems engineering and vehicle integration contract to run through 1970.

In a separate project, Boeing-Houston has been awarded a NASA contract for spacecraft engineering and assessment work. The new agreement is valued at approximately \$11 million through 1970. The space agency, however, can exercise options for two additional years. Under the contract, the Houston facility will provide NASA's Manned Spacecraft Center with a spacecraft readiness assessment for each Apollo mission, as well as supplying management and technical assistance. This replaces the technical integration and evaluation (TIE) agreement which expired at the end of 1969.



Boeing will compete for contract on proposed NASA space shuttle vehicle to fly round trip from Earth to orbit.

Astronauts will make expeditions from Lunar Module across surface of moon in Lunar Rover, designed and built by Boeing.





With the 747's non-stop flight from Seattle as its feature attraction, the company cooperated with the U.S. Government to demonstrate its interest in international business at the 28th International Aeronautical and Space Exposition at Paris in May and June, 1969. The fourth airplane in the 747 test fleet, only 23 days after its first flight, was completely outfitted with airline seats and amenities and flown to Paris in 9 hours 18 minutes, carrying company officials, FAA representatives and ground crewmen. At the air show, it drew thousands of visitors despite almost continual downpours of rain during its three-day stay.

In addition to the 747, Boeing demonstrated the CH-47 (Chinook) helicopter, displayed company product models in two exposition buildings and entertained hundreds of industry leaders, government officials and press representatives at a strategically located double chalet.

The air show only emphasized the company's international efforts. New airplane customers included such names as Royal Air Maroc, LAB-Bolivia, Eastern Provincial (Canada), and Pluna (Uruguay). In Italy, Alinavi, an Italian company in which Boeing is the majority stockholder, continued to negotiate with the Italian armed forces, seeking an order for a hydrofoil gunboat based on designs of the Tucumcari, Boeing-built water-jet-propelled hydrofoil now in service with the U.S. Navy.

Boeing of Canada, Ltd., a wholly-owned subsidiary, announced plans for a \$3.5 million structural

fiberglass factory to be built adjacent to the Winnipeg, Manitoba, international airport. The factory, expected to be completed by the early Spring of 1971, will provide fiberglass components for Boeing products and later may offer services to other companies requiring high-quality plastic products. It is to be designated as the Winnipeg Division of the Canadian company.

Boeing also continued procurement efforts outside the United States, obtaining, among other products, fifth engine transportation pods for the 747 from a Japanese manufacturer. A fifth engine pod enables a 747 to carry a spare engine under its wing, delivering it to remote points without the necessity of chartering a special freighter. Several airlines have ordered these pods as accessories.

The company's ownership interest in Messerschmitt-Bolkow decreased during the year through the merger of that company with Hamburger Flugzeugbau and the addition of Siemens AG of Munich, one of the world's largest electrical manufacturing corporations, as a partner. Boeing owns slightly less than 10% in the resulting Messerschmitt-Bolkow-Blohm GmbH which, with 20,000 employees, is the largest aerospace company in Germany.

Boeing International Corporation, with headquarters in Seattle, added offices in Canberra and Sydney to those already established in Paris, London, Munich, Bad Godesberg, Rome and Tokyo. In addition, the Commercial Airplane Group has offices in Geneva and Beirut.



747 superjet flew non-stop from Seattle to Paris Air Show, attracted thousands of visitors during three days on display.

